STUDY OF ULTRA SONOGRAPHIC EVALUATION OF VAGINAL BLEEDING IN PREGNANCY OF BIHAR WOMEN

Original Research Article

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Abstract

Background: Vaginal bleeding in pregnancy at different weeks of gestation is a common disorder, but if quantity, duration, or frequency exceed it, it becomes life-threatening and demands emergency treatment with admission. Hence, it is mandatory to know the cause of bleeding by clinical examination. If clinical examination is inconclusive, USG is ideal to diagnose. **Materials and Methods:** 100 pregnant women aged between 18 to 45 years old. Presented vaginal bleeding was studied with clinical examination and compared with USG/TVS studies. **Result:** The highest age group for vaginal bleeding was 21–30 years, followed by 31–40 years. USG findings ruled out the majority of obstetrics and gynecology problems observed in less than 20 weeks of gestation as compared with more than 20 weeks of gestation. Abruption of the placenta, abortion disorders, and the location of the placenta were misdiagnosed by clinical examination and properly diagnosed by the USG study. **Conclusion:** The USG/ TVS study is an ideal and perfect technique to rule out the exact causes of vaginal bleeding. It will be helpful to obstetricians and gynecologists to treat such patients efficiently and avoid life-threatening emergencies, morbidity, and mortality among pregnant women.

INTRODUCTION

The introduction of ultrasonography to obstetrics by Ian Donald and his colleagues in 1958 is now regarded as one of the major milestones of modern medicine. Any discharge of blood from the vagina during pregnancy constitutes vaginal bleeding. The bleeding is often known to occur at a point from conception until the pregnancy; vaginal bleeding is common.[1] In the first trimester, complications are often considered to be a sign of a problem in pregnancy. It occurs in 20–25% of pregnant women.[2] The significance of the initial diagnosis and clinical approach to vaginal bleeding depends on the gestational age and bleeding characteristics. Vaginal bleeding during early pregnancy is associated with a 1-6 fold increased risk of many adverse outcomes, including preterm labor (PTL), preterm premature rapture of membrane (PPROM), and antepartum hemorrhage (APH).[3]

As bleeding persists or worsens in pregnancy, the risk of associated morbidities grows. 50% of women who suffer from vaginal bleeding during early pregnancy go on to a normal pregnancy.[4] The major causes are abortion, ectopic pregnancy, and molar pregnancy. Hence, an attempt was made to compare the clinical diagnosis and USG findings in different gestational weeks of pregnancy to evaluate the major causes of vaginal bleeding during pregnancy.

MATERIALS AND METHODS

100 women aged between 18 to 45 years regularly visited the obstetrics and gynecology departments of Narayan Medical College Hospital in Sasaram, Bihar (821305), were studied.

Inclusive Criteria
Pregnant women presenting with vaginal bleeding of any cause were selected for study.

Exclusion Criteria
The women with vaginal bleeding without pregnancy were excluded from the study.

Method: The clinical data, including age, parity, gestational age, complete obstetric history, menstrual history, and details of present and previous pregnancies, were noted. Details of vaginal bleeding, including time of first episode, quantity, duration, associated pain in the abdomen, and history of expulsion of fleshy mass clots, were also noted in a predesigned Performa. A complete general physical examination, clinical examination, and detailed pelvic examination were also done in every patient.

All the patients were subjected to transabdominal and transvaginal ultrasonography. Trans-vaginal sonography (TVS) was conducted whenever trans-

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abdominal ultrasonography was not conclusive or equivocal. The trans-abdominal sonography was done, and TVS was done using a 5.7 MHz transducer. The clinical findings and operative procedures were correlated.

The duration of the study was June 2020 to June 2021.

Statistical analysis: findings of USG and clinical findings were studied and compared with percentages. The statistical analysis was done in SPSS software.

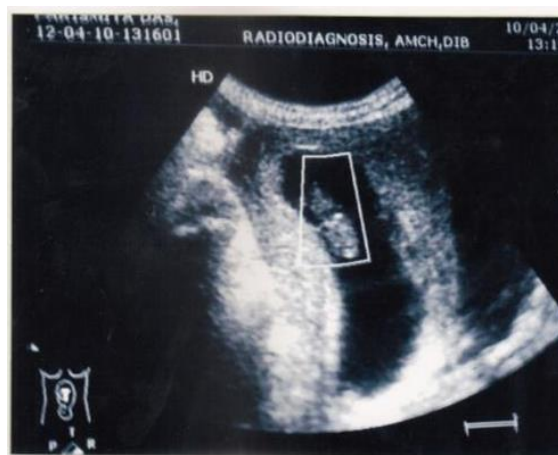Figure-1(a): Complete Abortion

Figure-1(b): Incomplete Abortion

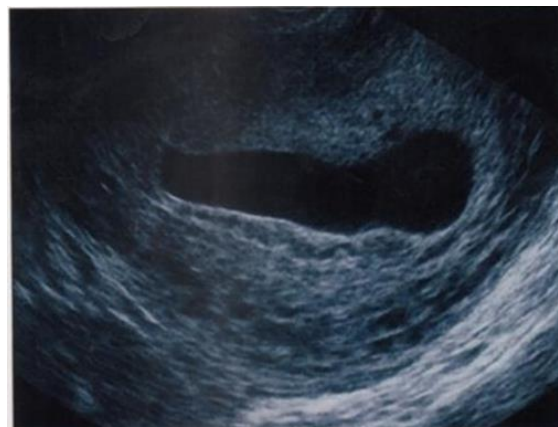Figure-2(a): Missed Abortion

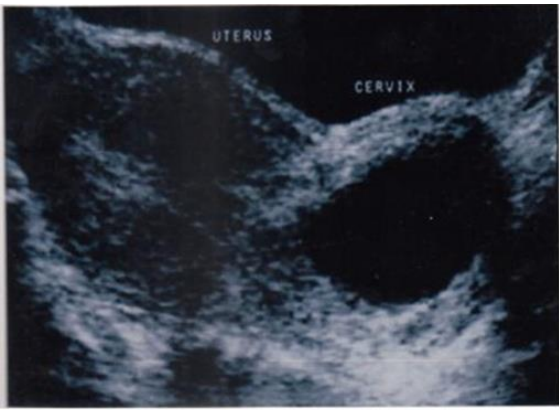Figure-2(b): Ectopic Pregnancy

Figure-3(a): Blighted Ovum

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Figure-3(b): Inevitable Abortion
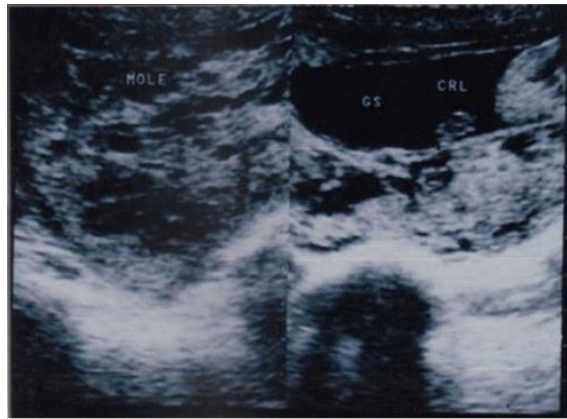

Figure-4(a): Normal Pregnancy

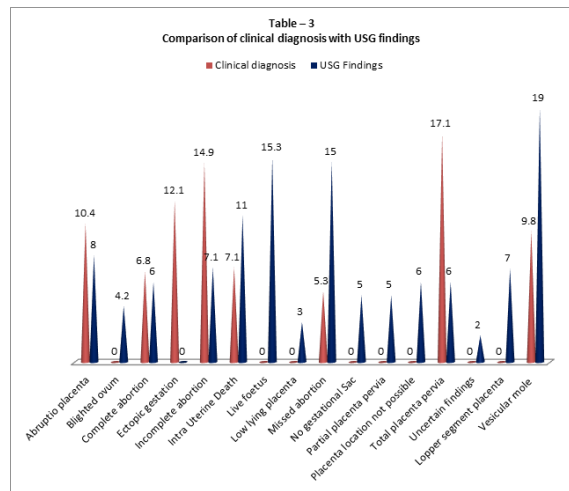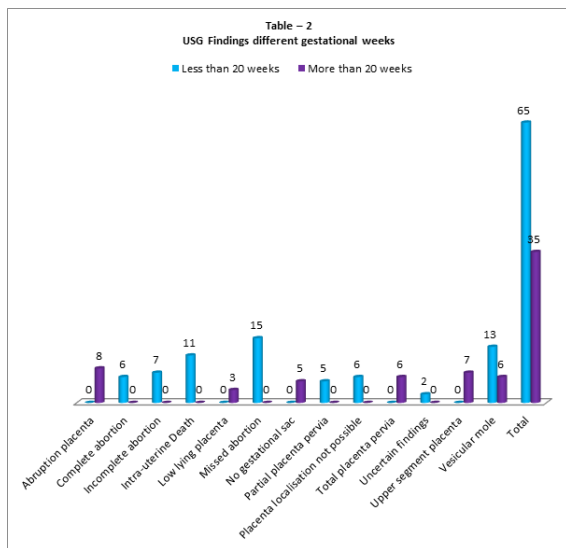Figure-4(b): Retro Chorionic Haemorrhage

Figure-5(a): Hydatiform Mole (Complete)

Figure-5(b): Partial Mole

RESULTS

Table 1: Distribution of age in patients with bleeding in pregnancy 7 less than 20 years of age, 53 were between 21-30 years of age, 34 were between 31-40 years of age, and 6 were more than 40 years of age.

Table 2: USG findings in different periods 8 patients had an abruptio placenta in more than 20 weeks, 6 had a complete abortion in less than 20 weeks, and 7 had an incomplete abortion in less than 20 weeks. 11 had intrauterine death less than 20 weeks of gestation. 3 had a low-lying placenta in more than 20 weeks. 15 had missed abortion in less than 20 weeks, 5 had no gestation sac in more than 20 weeks, 5 had partial placenta pervia in less than 20 weeks, 5 patients had localization of placenta that was not possible, 6 had total placenta pervia after 20 weeks of gestation, 2 had uncertain findings, 7 had upper segmental placenta, 13 had vesicular mole in less than 20 weeks, and 6 had more than 20 weeks of gestation.

Table 3: Abruptio placenta, complete abortion, incomplete abortion, ectopic gestation, and placenta pervia are confirmed by USG and misdiagnosed in clinical examination.

Table – 1
Distribution of age in the vaginal bleeding in pregnancy patients

> 40 years, 6
Less than 20 years, 7
31-40 years, 34
21-30 years, 53

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Table – 2
USG Findings different gestational weeks

Table – 3
Comparison of clinical diagnosis with USG findings
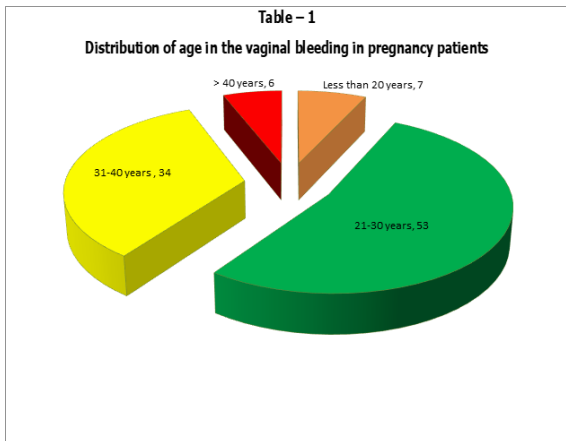
Table 1: Distribution of age in the vaginal bleeding in pregnancy patients

Age group	No of patients	Percentage (%)
Less than 20 years	07	7
21-30 years	53	53
31-40 years	34	34
> 40 years	06	6

Table 2: USG Findings different gestational weeks

USG Findings	Less than 20 weeks	More than 20 weeks
Abruption placenta	0	8
Complete abortion	6	0
Incomplete abortion	7	0
Intra-uterine Death	11	0
Low lying placenta	0	3
Missed abortion	15	0
No gestational sac	0	5
Partial placenta pervia	5	0
Placenta localisation not possible	6	0
Total placenta pervia	0	6
Uncertain findings	2	0
Upper segment placenta	0	7
Vesicular mole	13	6
Total	65	35

Table 3: Comparison of clinical diagnosis with USG findings

Diagnosis	Clinical diagnosis	USG Findings
Abruptio placenta	10.4	8
Blighted ovum	0	4.2
Complete abortion	6.8	6
Ectopic gestation	12.1	0
Incomplete abortion	14.9	7.1
Intra Uterine Death	7.1	11
Live foetus	0	15.3
Low lying placenta	0	3
Missed abortion	5.3	15
No gestational Sac	0	5
Partial placenta pervia	0	5
Placenta location not possible	0	6
Total placenta pervia	17.1	6
Uncertain findings	0	2
Lopper segment placenta	0	7
Vesicular mole	9.8	19

DISCUSSION

Present study of USG evaluation of vaginal bleeding in Bihar population. The distribution of age groups 7 women were less than 20 years old, 53 women were between 21-30 years old, 34 women were between 31-40 years old, and 6 were more than 40 years old [Table 1]. According to USG findings in different gestational weeks, 8 abruptio placentas were in more than 20 weeks of gestation; 6 complete abortions

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were in less than 20 weeks; 7 complete abortions were in less than 20 weeks; and 11 intrauterine deaths occurred in less than 20 weeks of gestation. 15 missed abortions, 5 partial placenta pervia, 6 placenta localizations not possible, 2 uncertain findings 13 vesicular moles were observed in less than 20 weeks; 3 low-lying placenta; 5 had no gestational sac; 6 total placenta pervia; 7 upper-segment placenta; and 6 vesicular moles were observed in more than 20 weeks of gestation [Table 2]. Abruptio placenta, competitive abortion, ectopic gestation, intrauterine death, missed abortion, and total placenta pervia are confirmed by the USG study and misdiagnosed by clinical examination [Table 3; Figures 1–5]. These findings are more or less in agreement with previous studies.[5-7]

Bleeding in early pregnancy is a common event that frequently heralds an abnormality, interrupting the normal development of an early gestation. It is also one of the commonest causes for the majority of emergency admissions to the obstetrics department and a common reason for ultrasound examinations in the first trimester. USG has new dimensions in the management of early pregnancy bleeding per vaginum for accurate diagnosis and study of the nature of the pregnancy (viable or non-viable). Hence, patients can avoid unnecessary medical treatment and prolonged hospitalization. It also indicates the need for D and C by diagnosing retained products in the uterine cavity. The USG examination should be done at the earliest possible time so as to confirm the clinical findings.

Majority of the vaginal bleeding patients were anemic; the age group was between 20 to 30 years, and low socio-economic status was noted.[8,9] It was also reported that age and increased parity affect a woman's risk of a miscarriage followed by severe vaginal bleeding. Women younger than 20 years are also more prone to miscarriage; over 26% of miscarriage is observed in women older than 20 years of age.[10]

Usually amenorrhea is observed between 8-12 weeks of pregnancy, which is one of the major causes of vaginal bleeding.

Associated signs and symptoms of vaginal bleeding were threatened. Abortion is usually painless, but there may be a tolerable backache or dull pain in the lower abdomen. Inevitable abortion causes aggravation of pain in the lower abdomen, which may be colicky in nature. In complete abortion, it is also accompanied by colicky pain with profuse bleeding. Abdominal pain in ectopic pregnancy is the most constant feature of the triad, including amenorrhea and vaginal bleeding. Varying degrees of lower abdominal pain may be present in molar pregnancy as well.

CONCLUSION

In the present, USG evaluation of vaginal bleeding has proved that it is a very valuable tool in the diagnosis of various causes of bleeding per vaginum in the first trimester of pregnancy and in the prolonged later period of pregnancy too. USG positively helps in accessing safe continuation of pregnancy and timely intervention for abnormal pregnancy. An embryonic gestation is diagnosed only by USG. But this study demands further embryological, genetic, pathophysiological, nutritional, and hormonal studies because the exact pathogenesis of different trimesters of pregnancy's bleeding is still unclear.

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